Problem Set Answer Key
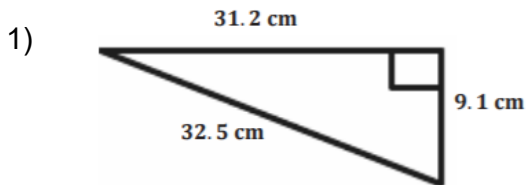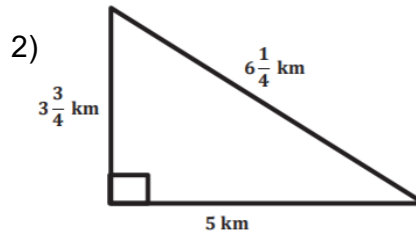
Calculate the area of each right triangle below. Note that the figures are not drawn to scale.

1)

31.2 cm

9.1 cm

32.5 cm

$$A = \frac{1}{2}bh = \frac{1}{2}(31.2 \text{ cm})(9.1 \text{ cm}) = 141.96 \text{ cm}^2$$

2)

$6\frac{1}{4}$ km

$3\frac{3}{4}$ km

5 km

$$A = \frac{1}{2}bh = \frac{1}{2}(5 \text{ km})\left(3\frac{3}{4} \text{ km}\right) = \frac{1}{2}\left(\frac{5}{1} \text{ km}\right)\left(\frac{15}{4} \text{ km}\right) = \frac{75}{8} \text{ km}^2 = 9\frac{3}{8} \text{ km}^2$$
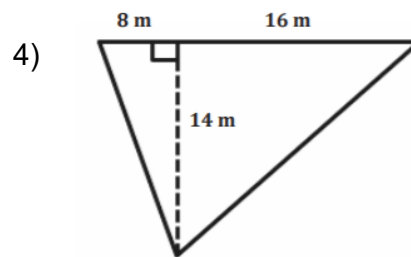
3)

5.5 in.   4.4 in.

3.3 in.   6.1 in.
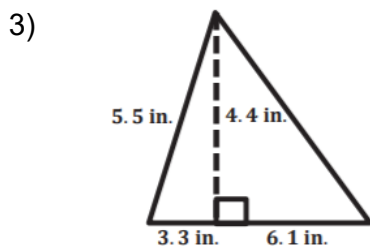
$$A = \frac{1}{2}(3.3 \text{ in.})(4.4 \text{ in.}) = 7.26 \text{ in}^2$$

$$A = \frac{1}{2}(6.1 \text{ in.})(4.4 \text{ in.}) = 13.42 \text{ in}^s$$

$$A = 7.26 \text{ in}^2 + 13.42 \text{ in}^2 = 20.68 \text{ in}^2$$

OR

$$A = \frac{1}{2}(9.4 \text{ in.})(4.4 \text{ in.}) = 20.68 \text{ in}^2$$
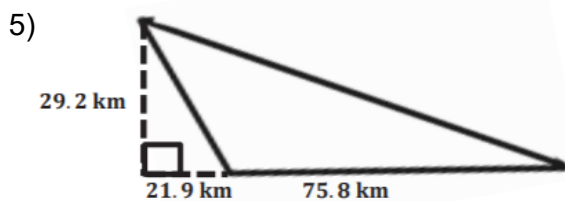
4)

8 m   16 m

14 m

$$A = \frac{1}{2}(8 \text{ m})(14 \text{ m}) = 56 \text{ m}^2$$

$$A = \frac{1}{2}(16 \text{ m})(14 \text{ m}) = 112 \text{ m}^2$$

$$A = 56 \text{ m}^2 + 112 \text{ m}^2 = 168 \text{ m}^2$$

OR

$$A = \frac{1}{2}(24 \text{ m})(14 \text{ m}) = 168 \text{ m}^2$$

5)

29.2 km

21.9 km   75.8 km

$$A = \frac{1}{2}(75.8 \text{ km})(29.2 \text{ km}) = 1,106.68 \text{ km}^2$$

You can use either method to solve each question. Be sure you show all your work.